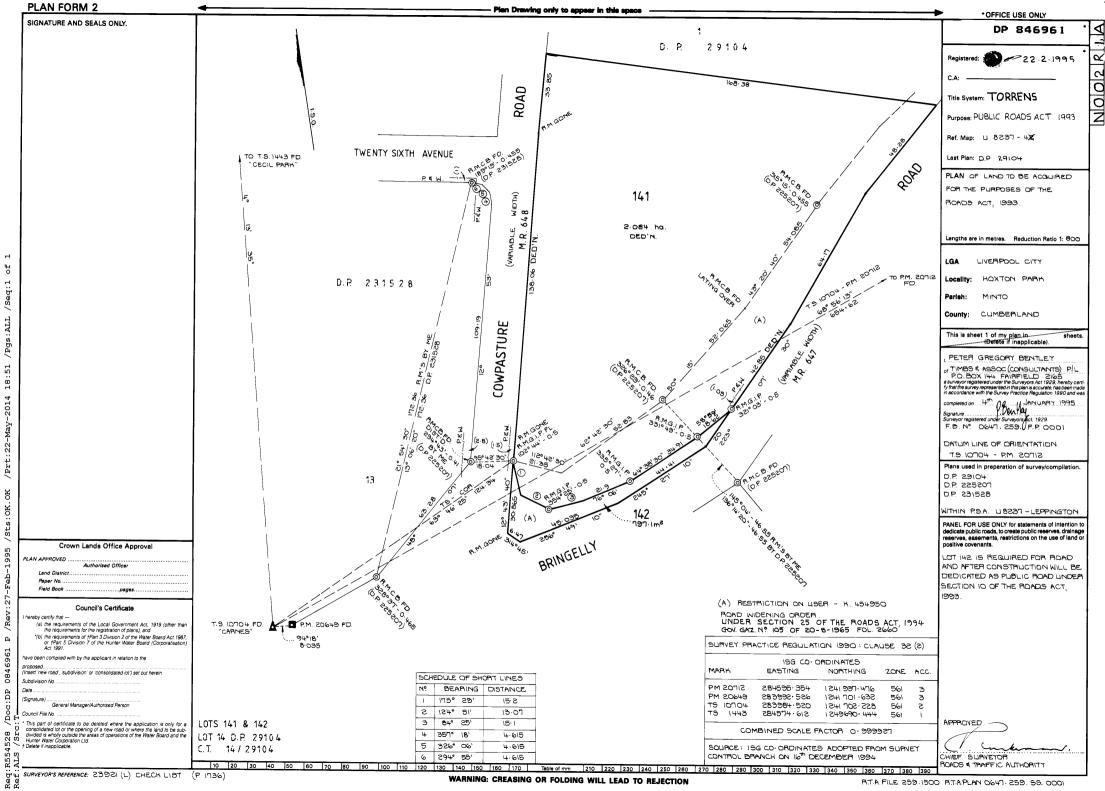
DP 29104	
FEET INCHES	METRES
12 -	3.65
42 -	12.802
LINKS 1	METRES
2	0.201 0.402 0.457
2.27 2.37	0.477
4.3	0.805
5 6	1.006 1.207
8 10	1.604 2.012
15 21	3.018 4.22
22 28	4.426
30.3	5.633 6.09
32.17 48.42	6.472 9.741 9.897
49.2 67	9.897 13.47
74 83	14.886
84.2	16.93
93.5 100	18.809 20.117
100.1 100.2	20.137
100.4 103.5	20.197
103.7	20.861
104.1 111.15 113.1	22.360
127.21	22.75; 25.591
140.7 144.5	28.304
150 161.9	30.175 32.569
168.25	35.84
170 176 196.3	34.199
176	35.406 39.489
218	40.23
220.7 223.8	44.39
227.2 236.08	45.709 47.49
240	48.28
244.3 253	49.145 50.89
264.24 290	58.33
300 308	60.35
308.30	62.036
310 312.4	62.36; 62.84
318.2 319	64.01 64.17
324.7 325	65.319
325.5 330	65.38 65.48
346	69.60
357.5 359.3 367	71.916
367 380	73.829
381.2 400	76.444 76.68 80.46
404.7	81.41

CONVERSION REGISTRAR GENER	RAL'S DEPARTMEI TINUED
LINKS	METRES
428.2 450	86.140 90.526
459 474	92.336 95.354
484.2 490.7	97.406 98.713
500	100.584
512.4 530	103.078 106.619
578.3 596	116.335
602.1	119.896 121.123 121.948
606.2 620.2	
651.7 652.35	131.101 131.232 134.491
668.55	145.847
725 730.3 745.4	146.913 149.951
800	160.934
828.9 837 839.7	166.748 168.378 168.921
839.7 869.9	168.921 174.996
915 921	184.069
936	185,276 188,293
1017.55 1042.4	204.698
1048.3	210.884
1051	211,428 221,446
1146.7 1161.7 1197.8	230.679 233.697 240.959
1222.3	245.888
1233.6	248.161 250.384
1244.65 1314.5 1324	250.384 264.435 266.346
1509.34	303,631
AC RD P	НА
5 - 7 1/2 5 - 8 1/2 5 - 9 1/2 5 - 16 3/4 5 - 21 1/4 5 - 27 3/4 5 - 31 5 - 33 1/2 5 - 34 1/2 5 1 13	2.042 2.045
5 - 9 1/2 5 - 16 3/4	2.047
5 - 16 3/4 5 - 21 1/4 5 - 27 3/4	2.066 2.077 2.094
5 - 7 1/2 5 - 8 1/2 5 - 9 1/2 5 - 16 3/4 5 - 21 1/4 5 - 27 3/4 5 - 31 5 - 33 1/2 5 - 34 1/2 5 1 13 5 1 15 1/4 8 2 24	
5 - 33 1/2 5 - 34 1/2	2.1 2.111 2.157
5 1 13 5 1 15 1/4	
8 2 24 9 3 20 3/4	3.5 3.998
, 5 25 5/4	.,,,,
	•











Coffey Geotechnics Pty Ltd Chatswood Level 18, Tower B, Citadel Tower 799 Pacific Highway Chatswood NSW 2067



Certificate of Analysis

NATA Accredited Accreditation Number 1261 Site Number 18217

Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: Charlie Lee

Report 421027-W

Client Reference GEOTLCOV25068AA

Received Date Jun 06, 2014

Client Sample ID			BH1A	ВН6
Sample Matrix			Water	Water
Eurofins mgt Sample No.			S14-Jn05404	S14-Jn05405
Date Sampled			Jun 04, 2014	Jun 06, 2014
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM	Fractions			
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1	< 0.1
ВТЕХ				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	71	86
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions			
Naphthalene ^{N02}	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)N04	0.02	mg/L	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)N01	0.05	mg/L	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.001	mg/L	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001



Client Sample ID			BH1A	BH6 Water
Sample Matrix			Water	
Eurofins mgt Sample No.			S14-Jn05404	S14-Jn05405
Date Sampled			Jun 04, 2014	Jun 06, 2014
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Phenanthrene	0.001	mg/L	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001
Total PAH	0.001	mg/L	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	106	123
p-Terphenyl-d14 (surr.)	1	%	126	123
Ammonia (as N)	0.01	mg/L	0.24	0.50
Alkalinity				
Total Alkalinity (as CaCO3)	5	mg/L	1200	350
Major Anions				
Bicarbonate Alkalinity (as CaCO3)	5	mg/L	1200	350
Carbonate Alkalinity (as CaCO3)	5	mg/L	< 5	< 5
Chloride	1	mg/L	7400	6200
Nitrate (as N)	0.01	mg/L	0.09	3.2
Sulphate (as S)	2	mg/L	190	330
Alkali Metals	•			
Calcium	0.5	mg/L	170	130
Magnesium	0.5	mg/L	750	1100
Potassium	0.5	mg/L	28	42
Sodium	0.5	mg/L	7100	5000
Heavy Metals	·			
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001
Cadmium (filtered)	0.0001	mg/L	0.0003	0.0008
Chromium (filtered)	0.001	mg/L	0.004	< 0.001
Copper (filtered)	0.001	mg/L	0.003	< 0.001
Iron (filtered)	0.05	mg/L	0.93	< 0.05
Lead (filtered)	0.001	mg/L	0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.003	0.008
Zinc (filtered)	0.005	mg/L	0.009	0.029



Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins mgt Suite 1			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 06, 2014	7 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Jun 06, 2014	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 06, 2014	7 Day
- Method: LM-LTM-ORG2010			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 06, 2014	7 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Alkalinity	Sydney	Jun 13, 2014	14 Day
- Method: E035 Alkalinity			
Major Anions			
Bicarbonate Alkalinity (as CaCO3)	Sydney	Jun 13, 2014	14 Day
- Method: E035 Alkalinity (CO3, HCO3, OH)			
Carbonate Alkalinity (as CaCO3)	Sydney	Jun 13, 2014	14 Day
- Method: E035 Alkalinity (CO3, HCO3, OH)			
Chloride	Sydney	Jun 13, 2014	28 Day
- Method: E033 /E045 /E047 Chloride			
Nitrate (as N)	Sydney	Jun 13, 2014	28 Day
- Method: E037 /E051 Nitrate as N			
Sulphate (as S)	Sydney	Jun 13, 2014	28 Day
- Method: E045 Sulphate			
Metals M8 filtered	Sydney	Jun 06, 2014	28 Day
- Method: E020/E030 Filtered Metals in Water & E026 Mercury			
Ammonia (as N)	Sydney	Jun 06, 2014	28 Day
- Method: E036/E050 Ammonia as N			
Alkali Metals	Sydney	Jun 06, 2014	180 Day
- Method: E022/E030 Unfiltered Cations in Water			
Heavy Metals (filtered)	Sydney	Jun 06, 2014	180 Day
- Method: E020/E030 Filtered Metals in Water			



Melbourne

3-5 Kingston Town Close Oakleigh VIC 3166 Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

Sydney Unit F6, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

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ABN - 50 005 085 521 e.mail: EnviroSales@eurofins.com.au web: www.eurofins.com.au

Company Name: Coffey Geotechnics Pty Ltd Chatswood

Level 18, Tower B, Citadel Tower 799 Pacific Highway

Chatswood NSW 2067

GEOTLCOV25068AA Client Job No.:

Address:

Order No.:

Report #: 421027

Phone: +61 2 9406 1000 Fax: +61 2 9406 1002 Received: Jun 6, 2014 4:10 PM

Due: Jun 17, 2014 Priority: 5 Day

Contact Name: Charlie Lee

Eurofins | mgt Client Manager: Jean Heng

		Sample Detail			Total Alkalinity (as CaCO3)	Polycyclic Aromatic Hydrocarbons	Metals M8 filtered	Major Anions	Major Cations (filtered Fe)	Eurofins mgt Suite 1
Laboratory who	ere analysis is co	onducted								
Melbourne Lab	oratory - NATA S	Site # 1254 & 14	271							
Sydney Labora	tory - NATA Site	# 18217			Х	Х	Х	Χ	Χ	Х
Brisbane Labo	ratory - NATA Si	te # 20794								
External Labor	atory									
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
BH1A	Jun 04, 2014		Water	S14-Jn05404	Х	Х	Х	Х	Χ	Χ
BH6	Jun 06, 2014		Water	S14-Jn05405	Х	Х	Х	Х	Χ	Х

Eurofins | mgt Unit F6, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066 ABN: 50 005 085 521 Telephone: +61 2 9900 8400 Facsimile: +61 2 9420 2977



Eurofins | mgt Internal Quality Control Review and Glossary

General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- 2. All soil results are reported on a dry basis, unless otherwise stated.
- 3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
- 4. Results are uncorrected for matrix spikes or surrogate recoveries
- 5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise
- 6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

**NOTE: pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram mg/l: milligrams per litre
ug/l: micrograms per litre ppm: Parts per million
ppb: Parts per billion %: Percentage
ora/100ml: Organisms per 100 millilitres NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry Where a moisture has been determined on a solid sample the result is expressed on a dry basis.

LOR Limit of Reporting.

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

LCS Laboratory Control Sample - reported as percent recovery
CRM Certified Reference Material - reported as percent recovery

Method Blank In the case of solid samples these are performed on laboratory certified clean sands

In the case of water samples these are performed on de-ionised water.

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

DuplicateA second piece of analysis from the same sample and reported in the same units as the result to show comparison.

Batch Duplicate A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.

Batch SPIKE Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.

USEPA United States Environmental Protection Agency

APHA American Public Health Association

ASLP Australian Standard Leaching Procedure (AS4439.3)

TCLP Toxicity Characteristic Leaching Procedure

COC Chain of Custody

SRA Sample Receipt Advice

CP Client Parent - QC was performed on samples pertaining to this report

NCP Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

TEQ Toxic Equivalency Quotient

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50% $\,$

Results >20 times the LOR: RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

- 1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- 2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- 3. Organochlorine Pesticide analysis where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
- 4. Organochlorine Pesticide analysis where reporting Spike data. Toxophene is not added to the Spike.
- Total Recoverable Hydrocarbons where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported
 in the C10-C14 cell of the Report.
- 6. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- 7. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- 8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
- 9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
- $10. \ \ Duplicate \ RPD's \ are \ calculated \ from \ raw \ analytical \ data \ thus \ it \ is \ possible \ to \ have \ two \ sets \ of \ data.$



Quality Control Results

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank	·				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	.				
TRH C6-C9	mg/L	< 0.02	0.02	Pass	
TRH C10-C14	mg/L	< 0.05	0.05	Pass	
TRH C15-C28	mg/L	< 0.1	0.1	Pass	
TRH C29-C36	mg/L	< 0.1	0.1	Pass	
Method Blank					
BTEX					
Benzene	mg/L	< 0.001	0.001	Pass	
Toluene	mg/L	< 0.001	0.001	Pass	
Ethylbenzene	mg/L	< 0.001	0.001	Pass	
m&p-Xylenes	mg/L	< 0.002	0.002	Pass	
o-Xylene	mg/L	< 0.001	0.001	Pass	
Xylenes - Total	mg/L	< 0.003	0.003	Pass	
Method Blank					
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	3				
Naphthalene	mg/L	< 0.02	0.02	Pass	
TRH C6-C10	mg/L	< 0.02	0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02	0.02	Pass	
TRH >C10-C16	mg/L	< 0.05	0.05	Pass	
TRH >C16-C34	mg/L	< 0.1	0.1	Pass	
TRH >C34-C40	mg/L	< 0.1	0.1	Pass	
Method Blank					
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	< 0.001	0.001	Pass	
Acenaphthylene	mg/L	< 0.001	0.001	Pass	
Anthracene	mg/L	< 0.001	0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001	0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001	0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001	0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001	0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001	0.001	Pass	
Chrysene	mg/L	< 0.001	0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001	0.001	Pass	
Fluoranthene	mg/L	< 0.001	0.001	Pass	
Fluorene	mg/L	< 0.001	0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001	0.001	Pass	
Naphthalene	mg/L	< 0.001	0.001	Pass	
Phenanthrene	mg/L	< 0.001	0.001	Pass	
Pyrene	mg/L	< 0.001	0.001	Pass	
Method Blank		V 0.001	0.001	1 400	
Ammonia (as N)	mg/L	< 0.01	0.01	Pass	
Method Blank		V 0.01	0.01	1 400	
Alkalinity					
Total Alkalinity (as CaCO3)	mg/L	< 5	5	Pass	
Method Blank	ı my/L	_ `	J J	1 1 433	
Major Anions					
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 5	5	Pass	
Carbonate Alkalinity (as CaCO3)			5	Pass	
,	mg/L	< 5		1	
Chloride Nitrata (co.N.)	mg/L	< 1	1 0.01	Pass	
Nitrate (as N)	mg/L	< 0.01	0.01	Pass	
Sulphate (as S)	mg/L	< 2	2	Pass	



Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank					
Alkali Metals	_				
Calcium	mg/L	< 0.5	0.5	Pass	
Magnesium	mg/L	< 0.5	0.5	Pass	
Potassium	mg/L	< 0.5	0.5	Pass	
Sodium	mg/L	< 0.5	0.5	Pass	
Method Blank					
Heavy Metals					
Arsenic (filtered)	mg/L	< 0.001	0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001	0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001	0.001	Pass	
Copper (filtered)	mg/L	< 0.001	0.001	Pass	
Iron (filtered)	mg/L	< 0.05	0.05	Pass	
Lead (filtered)	mg/L	< 0.001	0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001	0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001	0.0001	Pass	
Zinc (filtered)	mg/L	< 0.005	0.001	Pass	
LCS - % Recovery	IIIg/L	< 0.003	0.003	Fass	
•		T		T	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	0/	407	70.400	D	
TRH C6-C9	%	107	70-130	Pass	
TRH C10-C14	%	79	70-130	Pass	
LCS - % Recovery		T			
BTEX	T				
Benzene	%	111	70-130	Pass	
Toluene	%	98	70-130	Pass	
Ethylbenzene	%	96	70-130	Pass	
m&p-Xylenes	%	101	70-130	Pass	
o-Xylene	%	101	70-130	Pass	
Xylenes - Total	%	101	70-130	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene	%	108	70-130	Pass	
TRH C6-C10	%	99	70-130	Pass	
TRH >C10-C16	%	85	70-130	Pass	
LCS - % Recovery	•			•	
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	%	120	70-130	Pass	
Acenaphthylene	%	121	70-130	Pass	
Anthracene	%	114	70-130	Pass	
Benz(a)anthracene	%	107	70-130	Pass	
` '	%	91	70-130		-
Benzo(a)pyrene			70-130	Pass	
Benzo(b&j)fluoranthene	%	90		Pass	
Benzo(g.h.i)perylene	%	113	70-130	Pass	-
Benzo(k)fluoranthene	%	85	70-130	Pass	
Chrysene	%	112	70-130	Pass	-
Dibenz(a.h)anthracene	%	88	70-130	Pass	
Fluoranthene	%	112	70-130	Pass	
Fluorene	%	123	70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	100	70-130	Pass	
Naphthalene	%	126	70-130	Pass	
Phenanthrene	%	114	70-130	Pass	
Pyrene	%	113	70-130	Pass	
LCS - % Recovery					
Ammonia (as N)	%	100	70-130	Pass	



Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery								
Alkalinity								
Total Alkalinity (as CaCO3)			%	103		70-130	Pass	
LCS - % Recovery								
Major Anions								
Bicarbonate Alkalinity (as CaCO3)			%	103		70-130	Pass	
Chloride			%	105		70-130	Pass	
Nitrate (as N)			%	83		70-130	Pass	
Sulphate (as S)			%	105		70-130	Pass	
LCS - % Recovery								
Alkali Metals								
Calcium			%	106		70-130	Pass	
Magnesium			%	92		70-130	Pass	
Potassium			%	87		70-130	Pass	
Sodium			%	98		70-130	Pass	
LCS - % Recovery								
Heavy Metals								
Arsenic (filtered)			%	114		70-130	Pass	
Cadmium (filtered)			%	112		70-130	Pass	
Chromium (filtered)			%	120		70-130	Pass	
Copper (filtered)			%	117		70-130	Pass	
Iron (filtered)			%	116		70-130	Pass	
Lead (filtered)			%	111		70-130	Pass	
Mercury (filtered)			%	118		70-130	Pass	
Nickel (filtered)			%	117		70-130	Pass	
Zinc (filtered)			%	117		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance	Pass	Qualifying Code
Spike - % Recovery	·	Source				Limits	Limits	Code
Total Recoverable Hydrocarbons	- 1999 NEPM Fract	ions		Result 1				
TRH C10-C14	S14-Jn05404	СР	%	72		70-130	Pass	
Spike - % Recovery					'			
Total Recoverable Hydrocarbons	- 2013 NEPM Fract	ions		Result 1				
TRH >C10-C16	S14-Jn05404	СР	%	76		70-130	Pass	
Spike - % Recovery	7 01100101	<u> </u>	70			10.00	. 4.00	
Polycyclic Aromatic Hydrocarbon				Result 1				
Acenaphthene	S14-Jn05392	NCP	%	118		70-130	Pass	
Acenaphthylene	S14-Jn05392	NCP	%	125		70-130	Pass	
Anthracene	S14-Jn05392	NCP	%	116		70-130	Pass	
Benz(a)anthracene	S14-Jn05392	NCP	%	104		70-130	Pass	
Benzo(a)pyrene	S14-Jn05392	NCP	%	89		70-130	Pass	
Benzo(b&j)fluoranthene	S14-Jn05392	NCP	%	89		70-130	Pass	
Benzo(g.h.i)perylene	S14-Jn05392	NCP	%	110		70-130	Pass	
Benzo(k)fluoranthene	S14-Jn05392	NCP	%	95		70-130	Pass	
Chrysene	S14-Jn05392	NCP	%	113		70-130	Pass	
Dibenz(a.h)anthracene	S14-Jn05392	NCP	%	82		70-130	Pass	
Fluoranthene	S14-Jn05392	NCP	%	112		70-130	Pass	
Fluorene	S14-Jn05392 S14-Jn05392	NCP	%	122		70-130	Pass	
	S14-Jn05392 S14-Jn05392	NCP	%	93		70-130		
Indeno(1.2.3-cd)pyrene		NCP	% %				Pass	
Naphthalene	S14-Jn05392			119		70-130	Pass	
Phenanthrene	S14-Jn05392	NCP NCP	%	118 113		70-130 70-130	Pass	-
D				1 1111		1 /0-130	Pass	1
Pyrene	S14-Jn05392	INCP	70	113		70-130	1 400	
Pyrene Spike - % Recovery	\$14-Jn05392	NCP	70			70-130	1 435	
,	\$14-Jn05392 \$14-Jn07829	NCP	%	Result 1		70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery					1				
Alkalinity		Г		Result 1					
Total Alkalinity (as CaCO3)	S14-Jn07788	NCP	%	104			70-130	Pass	
Spike - % Recovery				T	T T		T		
Major Anions		T T		Result 1					
Bicarbonate Alkalinity (as CaCO3)	S14-Jn04729	NCP	%	112			70-130	Pass	
Nitrate (as N)	S14-Jn05127	NCP	%	98			70-130	Pass	
Sulphate (as S)	S14-Jn05953	NCP	%	103			70-130	Pass	
Spike - % Recovery					, , ,				
Alkali Metals				Result 1					
Calcium	M14-Jn07148	NCP	%	100			70-130	Pass	
Magnesium	M14-Jn07148	NCP	%	88			70-130	Pass	
Potassium	M14-Jn07148	NCP	%	83			70-130	Pass	
Sodium	M14-Jn07148	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S14-Jn05089	NCP	%	105			70-130	Pass	
Cadmium (filtered)	S14-Jn05089	NCP	%	101			70-130	Pass	
Chromium (filtered)	S14-Jn05089	NCP	%	104			70-130	Pass	
Copper (filtered)	S14-Jn05089	NCP	%	98			70-130	Pass	
Iron (filtered)	S14-Jn05128	NCP	%	96			70-130	Pass	
Lead (filtered)	S14-Jn05089	NCP	%	94			70-130	Pass	
Mercury (filtered)	S14-Jn05089	NCP	%	97			70-130	Pass	
Nickel (filtered)	S14-Jn05089	NCP	%	100			70-130	Pass	
Zinc (filtered)	S14-Jn05089	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1					
TRH C6-C9	S14-Jn05405	CP	%	96			70-130	Pass	
Spike - % Recovery				<u> </u>					
BTEX				Result 1					
Benzene	S14-Jn05405	CP	%	97			70-130	Pass	
Toluene	S14-Jn05405	СР	%	83			70-130	Pass	
Ethylbenzene	S14-Jn05405	СР	%	89			70-130	Pass	
m&p-Xylenes	S14-Jn05405	СР	%	109			70-130	Pass	
o-Xylene	S14-Jn05405	СР	%	110			70-130	Pass	
Xylenes - Total	S14-Jn05405	СР	%	109			70-130	Pass	
Spike - % Recovery								7 5.55	
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions		Result 1					
Naphthalene	S14-Jn05405	СР	%	88			70-130	Pass	
TRH C6-C10	S14-Jn05405	CP	%	85			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1	Result 2	RPD			
TRH C6-C9	S14-Jn05404	СР	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
	S14-Jn05404	СР	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzene				< 0.001	< 0.001	<1	30%	Pass	
	S14-Jn05404	CP	ma/L	\ 0.001					
Toluene	S14-Jn05404 S14-Jn05404		mg/L ma/L						
Toluene Ethylbenzene	S14-Jn05404	СР	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene									



								ı	
Duplicate									
Total Recoverable Hydrocarbons -	2013 NEPM Fract	ions	•	Result 1	Result 2	RPD			
Naphthalene	S14-Jn05404	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10	S14-Jn05404	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S14-Jn05404	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S14-Jn07829	NCP	mg/L	0.029	0.028	4.0	30%	Pass	
Duplicate		•	, ,						
Alkalinity				Result 1	Result 2	RPD			
Total Alkalinity (as CaCO3)	S14-Jn05136	NCP	mg/L	1000	1100	7.0	30%	Pass	
Duplicate		1101		1000			22.12	1 5.55	
Major Anions				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S14-Jn07788	NCP	mg/L	560	490	14	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S14-Jn04729	NCP		< 5	< 5	<u>14</u> <1	30%	Pass	
, ,		NCP	mg/L	1				1	
Nitrate (as N)	S14-Jn05155		mg/L	< 0.01	< 0.01	<1	30%	Pass	
Sulphate (as S)	S14-Jn05953	NCP	mg/L	< 2	< 2	<1	30%	Pass	
Duplicate				T	D	DD5			
Alkali Metals				Result 1	Result 2	RPD		<u> </u>	
Calcium	M14-Jn07147	NCP	mg/L	0.58	< 0.5	140	30%	Fail	Q15
Magnesium	M14-Jn07147	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Potassium	M14-Jn07147	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Sodium	M14-Jn07147	NCP	mg/L	1.3	0.96	30	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S14-Jn05088	NCP	mg/L	0.0060	0.0056	3.0	30%	Pass	
Cadmium (filtered)	S14-Jn05088	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Chromium (filtered)	S14-Jn05088	NCP	mg/L	0.0020	0.0017	4.0	30%	Pass	
Copper (filtered)	S14-Jn05088	NCP	mg/L	0.0030	0.0024	9.0	30%	Pass	
Iron (filtered)	S14-Jn05127	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Lead (filtered)	S14-Jn05088	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S14-Jn05088	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S14-Jn05088	NCP	mg/L	0.0020	0.0020	9.0	30%	Pass	
Zinc (filtered)	S14-Jn05088	NCP	mg/L	0.0020	0.012	4.0	30%	Pass	
Duplicate	314-31103000	INCI	IIIg/L	0.012	0.012	4.0	3078	1 033	
Total Recoverable Hydrocarbons -	1000 NEDM Front	ione		Result 1	Result 2	RPD	T	T	
•			ma/l				200/	Boss	
TRH C10-C14	S14-Jn05405	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S14-Jn05405	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S14-Jn05405	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate	0040 NESTE			T	D	DD5			
Total Recoverable Hydrocarbons -				Result 1	Result 2	RPD	225	+_	
TRH >C10-C16	S14-Jn05405	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S14-Jn05405	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S14-Jn05405	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate					,				
Polycyclic Aromatic Hydrocarbons	S		T	Result 1	Result 2	RPD			
Acenaphthene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S14-Jn05405	СР	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S14-Jn05405	СР	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
		<u> </u>	<u>ə</u> , -						
Chrysene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	



Duplicate									
Polycyclic Aromatic Hydrocar	bons			Result 1	Result 2	RPD			
Fluoranthene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S14-Jn05405	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S14-Jn05405	СР	mg/L	< 0.001	< 0.001	<1	30%	Pass	



Comments

Sample Integrity

 Custody Seals Intact (if used)
 N/A

 Attempt to Chill was evident
 Yes

 Sample correctly preserved
 No

 Organic samples had Teflon liners
 Yes

 Sample containers for volatile analysis received with minimal headspace
 Yes

 Samples received within HoldingTime
 Yes

 Some samples have been subcontracted
 No

Qualifier Codes/Comments

Qualifier Godes/Goriments	
Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins I mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng Client Services

Bob Symons Senior Analyst-Inorganic (NSW)

James Norford Senior Analyst-Metal (NSW)

Ryan Hamilton Senior Analyst-Organic (NSW)

Ryan Hamilton Senior Analyst-Volatile (NSW)

Dr. Bob Symons Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested
- * Indicates NATA accreditation does not cover the performance of this service

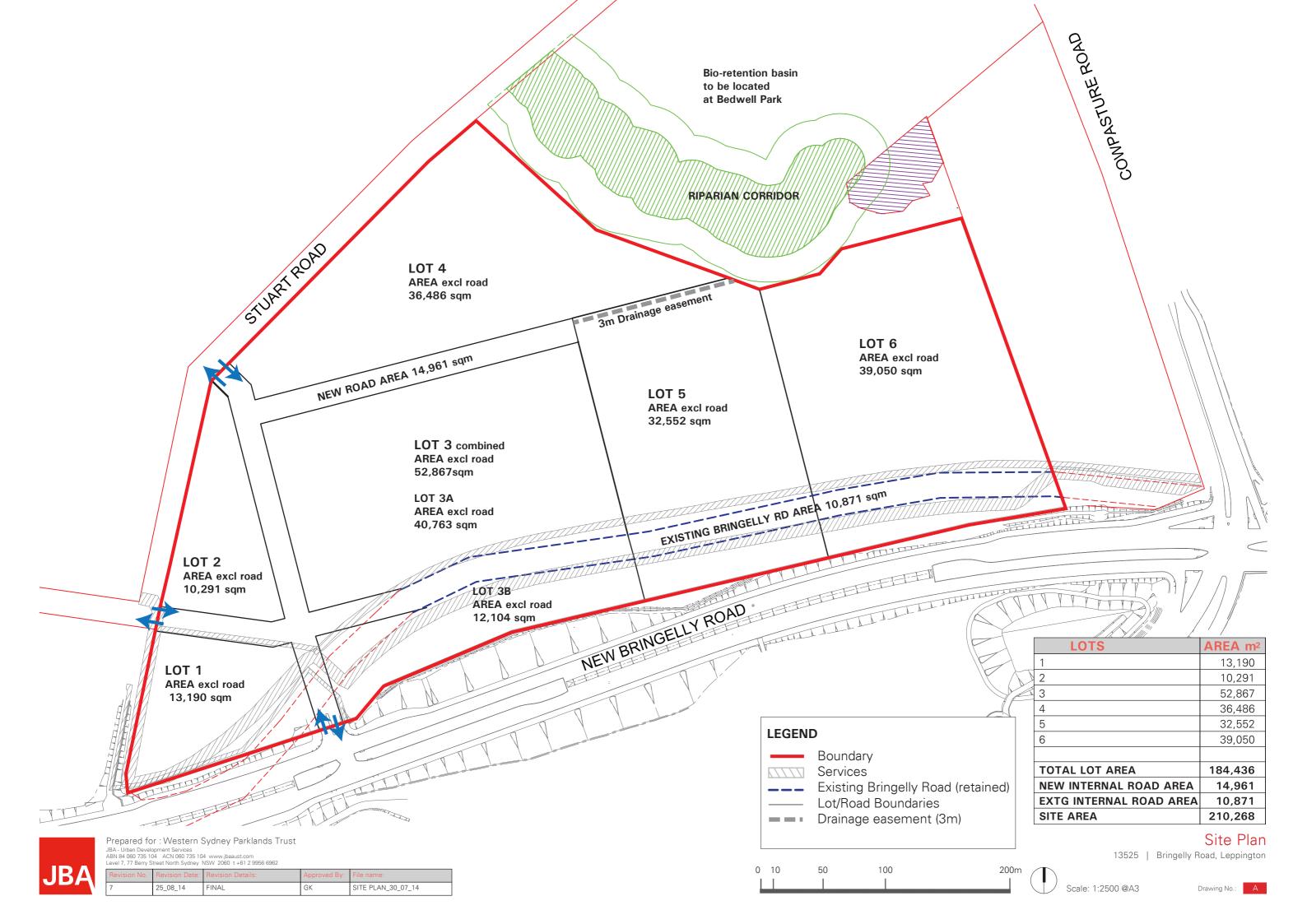
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Appendix F - Proposed Site Plan and Lot Layout Plan

(JBA Drawing nos A and B, August2014)









Prepared for: Western Sydney Parklands Trust
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LOT LAYOUT PLAN_30_07_14

200m 0 10

Lot Layout Plan

13525 | Bringelly Road, Leppington



Appendix G - Investigation Location Plan (Figure 1 from GEOTLCOV25068AA-AE)



